The failure of Global Distribution Systems New Entrants (GNEs) to offer a true alternative to traditional GDSs: myth, reality and opportunity

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Abstract

Distribution has been a key ICT (Information and Communication Technologies) area for airlines since decades ago and is a sector dominated by four (now three) Global Distribution Systems (GDSs) whose primacy has been threatened over the last three years by a set of new players, the so called GDS New Entrants (GNEs). GNEs emerged with the advent of Internet and open source technology as 'disintermediation' facilitators and generated vast interest from airlines because of their proposition to reduce the cost of distribution.

This paper explores the impact of ICTs on airlines with a focus on GDSs, provides an overview of the changing market dynamics, analyses the environment that led to the appearance of the GNEs and pinpoints the issues behind their until now failure to provide a true alternative to the GDSs. The analysis complements existing academic research in that it clarifies the critical issues in the air travel distribution field and provides an overview of current industry developments.

Keywords

Travel reservation systems; GDSs; Airline industry; Information and Communication Technologies.

1. Introduction

Internet technology and web based commerce have changed the airline industry dramatically in the last ten years. Information and Communication Technologies (ICTs) have always played a determinant role in the airline sector but with the advent of Internet and open source technology their impact is becoming more crucial and evident. Internet embracement by travellers allowed airlines to bypass the traditional distribution pattern through travel agencies and sell direct to end consumers. Web distribution combined with cheaper and more flexible technology allowed the new players to the market, low cost airlines (LCCs) to implement effective low-cost direct distribution strategies and intensify competition in the sector. Traditional airlines could not afford to rely on outdated distribution strategies and had to invest heavily in new technology to support the online Web sites, as post September 11 harsh economic conditions and low-fare carriers transformed the marketplace and passgner needs and preferences changed.

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This paper explores the impact of ICTs on airlines with a focus on GDSs, provides an overview of the changing market dynamics, analyses the environment that led to the appearance of the GNEs, and assesses the issues behind their until now failure to provide a true alternative to the GDSs. Finally, the paper drives conclusions from extensive research in industry data sources and academic literature, as well as discussions with industry experts and pinpoints that despite their initial failure to offer a true alternative to GDS distribution, GNEs' opportunity to be on the play is still alive. The extraordinarily dynamic nature of airline distribution makes any opinion about future developments in the sector sound like a crystal-ball prediction but experts seem to agree on a number of trends that are to stay.

2. The role of ICTs in the airline industry

Information technology is heavily embedded in every element of airlines operations. Recently it has become popular to broaden the term to explicitly include the field electronic communication and the abbreviation ICT (Information and Communication Technology) is being used. Information and Communication technologies may be defined as "electronic means of capturing, processing, storing, and disseminating information" and provide new mechanisms for handling existing resources and information.

Information and Communication Technologies (ICTs) can provide powerful strategic and tactical tools for organizations, which, if properly applied and used, could bring great advantages in promoting and strengthening their competitiveness (M. Porter 2001, 1985). Few other industries rely on so many partners to collaborate closely for delivering their products and few other value chains are as elaborate as the one for travel (D. Buhalis, 1998). All airlines rely heavily on ICTs for their operations and management and employ

them for a wide range of business functions. As a result ICTs have a major impact on cost and operational efficiency of airlines. There is an indirect and complex casual relationship between ICTs and profitability that is difficult to be quantified and generalized. There is evidence however, that well managed ICTs can generate tremendous value for organisations (S. Lee, 2001).

The portfolio of solutions for airline planning and control ranges from network planning, code share handling and crew management, to pricing, price distribution and revenue management. Airline ICTs are further supplemented by business intelligence services, marketing and sales solutions. Table 1 summarises the areas of ICT usage by airlines.

Table 1
Areas of ICT usage by airlines

ICT SUPPORTED AIRLINE FUNCTIONS
Administration & Finance
•Mid-office and back office
•accounting/invoicing/clearing
•treasury
•HR
•CRM
•Procurement
Yield and Revenue management software
Capacity management & Inventory systems (hosting)
Market Intelligence Systems
Frequent Flyer Management
Airline sales offices
Front, mid and back-office
Ticketing
Distribution/ Reservation
Distribution through the GDS
Direct distribution
Ticketing
Operations
Route scheduling
Flight/Crew/Maintenance software
Boarding & Departure Control Systems

We can identify two main groups of airline business functions supported by ICTs. The first includes an airline´s flight operational activities and the second its business management and control functions. As far as operations are concerned ICTs contribute to the optimisation of flight related procedures and processes. Airlines´ operations supported by ICTs include dispatch and coordination of flights and related resources namely crew, aircraft, passenger and freight processing, and airport facilities such as gates, ramps, baggage handling etc. From a business management and control point of view, airlines employ ICTs in most functions, from administrative tasks and accounting to financial management, human resources and procurement.

Airlines use technology to develop and manage their business model as well as to monitor the external environment and competition, undertake revenue analysis,

forecasting, maintain historical data, predict demand, and design desirable products. ICTs are critical for monitoring and forecasting the performance of Strategic Business Units (SBUs) and for deciding which markets airlines should penetrate and how. Routes and crew planning, frequency of service, choice of aircraft and developing relationships with strategic partners are key functions supported by ICTs (D. Buhalis, 1998). Strategic pricing and yield management are supported by running complex algorithms to establish best performance and profitability levels and optimisation and simulation tools are used heavily to maximise revenue in both network planning and revenue management processes (J. Hansman, 2005).

One of the most critical areas of ICT contribution in the airline industry has been distribution and collaboration with partners (D. Buhalis, 2004). And clearly the most significant recent technology factor affecting an airline´s business has been the internet which has shifted the playing field and undermined many of the schedule and pricing assumptions of the traditional airline industry.

Airline distribution has been for many years synonymous to Central Reservation Systems (CRSs) later termed Global Distribution Systems (GDSs). The GDS technology and travel agency network has been for decades the main distribution channel for airline product sales. GDSs, progressively consolidated their position to only four major systems, namely Sabre, Amadeus, Galileo and Wordspan (the two latter now both acquired by Travelport, Inc.). This was due to their predominance as the largest existing repositories of travel stock information, with backing from the travel suppliers that had created and funded them (D. Buhalis, M. Licata, 2002). The GDS sector oligopoly was further supported by the fact that impressive upfront investment in technology infrastructure was required to run a GDS raising important entry barriers to new entrants (Amadeus mainframe centre in Erding, Germany, was said to have the second biggest database after NASA).

The advent of the Internet allowed travellers to bypass travel agents and GDSs and book direct. Furthermore, advances in technology have allowed travel product hosting and distribution in an easier and less costly manner (at least from a technology point of view). These market developments brought about the idea of ‘disintermediation’ of travel agencies and GDSs with Low Cost Carriers, using Internet as the main means of distribution of their fares and tickets, as the keenest supporters of direct distribution.

3. Airline distribution through GDSs

The GDSs have served as the nexus of electronic commerce in travel for decades, providing virtual real-time connectivity between thousands of suppliers of travel inventory (airlines, hotels, car rental, tour operators, cruise lines, etc.) and hundreds of thousands of retails sellers of travel products. The four major GDSs combined handle over 1.4 million travel transactions a year.

The GDS platforms evolved from the original airline central reservation systems (CRSs) first built decades ago. Up to the 1970s travel agencies had to locate the best routes and fares for their customers in airlines' manuals and then call the carrier for availability and reservation. The emergence of CRSs not only provided a reservation tool and real-time connectivity to travel agencies. More importantly CRSs were effectively developed into marketing and distribution systems and contributed significantly to the competitiveness of vendor/host airlines (K. Boberg, F.Collison, 1985; L. Truit, V. Teye and M. Farris, 1991). GDSs provided airlines a network of more than fifty thousand selling points worldwide each and the ability to tailor their offer and prices to meet market conditions.

After decades of leadership as the carriers´ favourite distribution option, the GDS firms are now facing a number of changes that threaten their margins and business. These changes (described in section 4 below) are radically transforming the dynamics of airline distribution and the rules of distribution game.

4. Latest issues in airline distribution

4.1 Shift towards online sales, direct distribution and LCCs

The emergence of the Internet in the mid-1990s forced airlines to reshape their distribution strategy in order to boost their competitiveness. At the same time, a number of no-frills airlines emerged in both Europe and the US. These airlines developed simple distribution strategies and took full advantage of the Internet for communicating with their clientele (Mintel, 2001).

Both incumbent and low-fare carriers identified the Internet as a major opportunity to tackle distribution costs and to reengineer the structure of the industry (D. Bouhalis, 2004). LCCs were the first ones to invest heavily in driving direct sales through their online sales vehicles. They provided incentives for consumers to book online in order to ensure that they would not be distributed through the GDSs, in a way forcing their clients online (R. Chu, 2001). Consumers rapidly identified the Internet and airline Web sites as the platform to benefit from lower prices. In their effort to compete scheduled carriers, traditionally reliant upon GDS platforms, had to follow suit and develop their online presence. Major network airlines are determined to get on a comparable footing with the low-cost carriers (at least for the distribution of their leisure fares) and they are doing so by investing heavily their direct Web business and reducing their GDS distribution costs. Competition has set out fierce resulting in open price wars. As traditional airlines extend

their offer of low priced tickets, their revenue margins shrink accordingly and lowering GDS distribution costs becomes imperative.

Internet also brought about the appearance of online travel agencies in the marketplace such as Travelocity and Expedia. Online travel agencies consumer success and high ambitions made airlines react setting up Orbitz (as a start-up dubbed "T2" for supposedly "Travelocity Terminator"), an online Web site with direct connect technology to airlines, bypassing GDSs and their booking fees. This entity has become a powerful competitor only just behind second place Travelocity in market share, and enables carriers to connect directly via its technology to avoid GDS booking fees. But Orbitz also had some unintended consequences. Its use of powerful faring and shopping technology (from ITA Software) delivered a richer, more comprehensive view of available flight options and fares. Combined with a surging industry focus on discounted Web fares Orbitz helped accelerate the commoditisation of online air distribution and put further downward pressure on prices. In short, the airlines successfully addressed one problem (cost of distribution) but fuelled another problem (lower prices), which in turn generated more pressure to lower the cost of distribution.

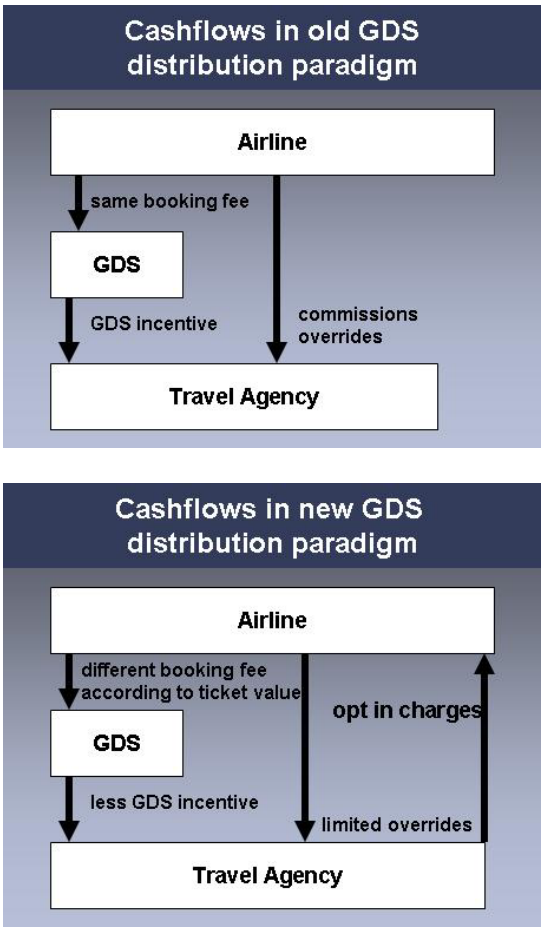
With the online sales and direct distribution developments GDSs have found themselves under the threat of 'disintermediation' and 'commoditisation'. As airlines go direct, GDSs seem no longer necessary. At the very least, with the appearance of online alternatives to the GDS, their product is turned into a commodity that does not justify a high booking fee. GDSs have reacted against the threats posed by the shift to online direct bookings in three ways: first they developed internet based technology providing the transactional infrastructure for Internet travel portals. Second they reinvented themselves as main technology suppliers for airlines extending their technology offer to a wider range of ICTs and technology consultancy services. Finally, GDS's have tried to pre-empt the airlines´ Web sites by establishing their own online travel agency Web sites, such as Travelocity (owned by Sabre) or Opodo (owned by Amadeus).

GDS and travel agency efforts to protect an intermediary based distribution model, carriers´ direct share of online air ticket sales will reach 70% in 2007, well over double the share of online travel agencies. The airlines branded web sites have been enjoying 20% plus growth year over year, and their marketing initiatives are driving customer loyalty and a powerful shift in consumer behaviour. This level of activity on the part of airlines will only accelerate in an effort to shift more and more share from the online agencies to their web sites.

What is today clear is that the GDS model based purely on travel agency distribution is being eroded by the shift to airline direct online sales. The increase in airlines´ negotiation power became apparent in the latest rounds of GDS-airline contracting that really focused on the cost of distribution for discounted leisure fares where it is said that airlines have achieved discounts up to 40% in their booking fees. The leisure travel segment is the one where airlines have the most leverage, yet these are the products which have the highest relative cost of distribution.

What is also clear is that ones suffering most from the shift to online direct sales are traditional travel agencies. Not all TAs will survive this era. The new airlines-endorsed GDS programmes for agencies impose steep cuts in incentive payments and allow for charges to be paid to the airline in case of selling low-value tickets. The shift is more obvious in the US (facilitated by the GDS deregulation in 2004) but it is also coming to Europe.

Table 2
Changing GDS model



4.2 Growth and risks in air travel demand

At the level of air travel demand it would seem that the future could not be brighter. Demand is growing worldwide as a result of economic development, globalisation, international trade, declining passenger fares and improved airline services. World airlines experienced average traffic growth of around 5% per year in the last 10 years. Embraer projects that world air traffic demand will reach 10.250 billing RPKs (revenue passenger kilometres) in 2025, up from 3.750 billion in 2005, representing an average

growth of 5.1% per year in the next 20 years. Over the next years, developing economies such as China and India will make a greater contribution towards global economic growth and deregulation in these parts of the world is expected to provide substantial benefits for passengers, airlines and the wider economy.

Despite such phenomenal growth projections air travel demand is subject to a series of old and new risks such as economic downturns, unpredictable geopolitical events, rising fuel costs and environmental concerns. Uncertainty in all these factors makes airlines vulnerable to the future and presses them to streamline costs (including distribution) as much as possible in order to protect potential falls in demand and/or revenue margins.

4.3 GDS deregulation

US and Europe regulated the GDS sector in the 1980s. These regulations were introduced at a time when GDSs were owned by airlines and there was a visible threat that GDSs would provide special treatment to their owners (for example biased display of the airline's flights on the travel agent's screen) and hassle fair competition.

As US airlines divested their stakes in their GDSs and Internet widened up the distribution and buying choices for airlines and end consumers respectively, it was thought that regulation was no longer necessary. In 2004, GDSs were deregulated in the US and the European Commission is currently examining whether to partially revise or fully abolish its Code of Conduct for CRSs (in Europe, Amadeus is still partly owned by Iberia, Air France and Lufthansa and hence the discussion on a partial instead of a full deregulation).

Deregulation brought to a new state of affairs where airlines are no longer obliged to participate equally in all GDSs and can steer business to selected GDSs, biased seat availability displays are no longer prohibited and airlines can negotiate freely booking fees and level of participation in each GDS.

As a result of GDS deregulation in the US and the prospect of an amended deregulation in Europe, GDSs are changing their business model, allowing for more flexibility in their pricing (F. Alamdari, K. Mason, 2006). But what deregulation effectively means is additional pressure on GDS margins. According F. Alamdari and K. Mason 60% of airlines see deregulation as an opportunity to gain greater control over their distribution channels, and to have their relationship with GDS companies on a "value for money" basis.

4.4. Technological advances

As mentioned earlier, an important entry barrier to the GDS business has been reliance of the GDS model on a heavy technological platform. GDSs based their system architectures on mainframe computing platforms running TPF, IBM´s durable Transaction Processing Facility OSS. These platforms served the GDSs and airlines well for decades because of their ability to handle huge transaction volumes (up to ten

thousands per second) with superb reliability and response times. They deliver secure systems with a 99.9% assurance of connectivity, response times of a fraction of a second and allow them to offer most accurate and comprehensive fares and pricing systems worldwide and process billions of travel transactions monthly.

With the Internet explosion the GDSs with their legacy mainframes were described as dinosaurs. The GDS applications designed decades ago have been repeatedly amended to accommodate new functionality, each time adding complexity and cost. But since the emergence of more flexible Internet-based technologies in the 1990s flexibility and open architecture have become key requirements in the market. New technology not only makes it easier to write applications in modern programming languages with an emphasis on adaptability and ease of integration with other systems. It also allows such applications to be run on PC-class servers running Linux OS, enabling a major up-front cost advantage over IBM mainframes in terms of hardware and software licenses.

Such technological advances have a dual impact on GDS. On the one hand they lower the entry barriers and open a window of opportunity for new entrants in the sector and on the other hand constitute big expense item to GDSs who in order not to become obsolete are obliged to migrate their legacy systems to open system architecture. All GDSs are currently engaged in costly exercises of moving toward an open system architecture (Amadeus is said to have invested more than one billion euros in the migration project).

5. GDS New Entrants (GNEs)

This changing environment with its hassles for the GDS industry gave rise in 2005 to a number of companies – including Triton Distribution Systems, ITA Software, G2 Switchworks and Farelogix– claiming to be developing GDS alternatives. In an atmosphere of airlines complaining about the cost of distribution and calling for an end to the oligopoly of the GDSs, the new entrants promised to grant big reductions in supplier segment fees and more flexible and functional distribution technology.

One of the GNEs, G2 SwitchWorks, is a Chicago based company founded by a team of former Orbitz executives. Another, Cambridge, Mass.–based ITA Software, played a key role in the Orbitz technology platform and is today a leader in airfare shopping and pricing technology. Farelogix is Miami-based and offers an application layer (the FLX Platform) that enables distributors to aggregate and manage content from multiple sources, including the GDSs, the Internet and direct connects to suppliers' reservation systems. Its CEO does not see it as an alternative GDS, but rather as a bridging solution to enable agencies to better managed inventory sourcing from multiple channels. However, the firm is offering direct connectivity to some airlines, making it an alternative channel for suppliers to distribute to agencies (Phocuswright, 2006).

GNEs received considerable attention in 2005 when they announced an estimated pricing for suppliers at a considerable discount from the then GDS fee levels of $2.00-$2.50 per booking. Triton and G2 SwitchWorks promised savings upwards of 75% of GDS costs,

while ITA suggested pricing could start around 40 cents per segment for its alternative GDS offering (dubbed "1U"). Furthermore, GNEs promised improved product and service emphasising that building their systems from scratch allowed them to design flexible systems with a focus on customer-centric functionality. Amongst others, GNEs offered unlimited capacity for new products and services, new products for airlines such as private fares and preferred display of inventory to authorized agencies, interoperability with any back-end system eliminating the integration burden, scalability through Service Oriented Architecture and secure direct connections to air carriers.

However, three years ahead it is still very uncommon for a travel agency to operate without the use of at least one of the big four GDS systems. Despite the announcement of several major agencies in beta testing and important supplier deals from G2 Switchworks and Ferlogix, the GNEs account for well under 1% of the US domestic market for segments, according to PhocusWright estimates.

6. Reasons behind GNEs' initial failure to provide an alternative to GDSs

GNEs have yet to live up to the expectations as their market penetration has been less than 1% (phcous nov 06). Instead of migrating to the new GDS promising environment the airlines have used the GNE offer as a negation tool in their expiring contract negotiations with the GDSs. Major carriers have apparently extracted substantial concessions (30-40% discounts) and achieved many of their goals in these negotiations. Why have the GNE´s (when they seemed to address the two most crucial airline concerns, superior technology and cost of distribution) failed to date to win market share from the GDSs? There are several important reasons for this:

6.1 Overestimation of technology offer

GNE's direct connect promise has remained unfulfilled. To date only the major online agency, Orbitz, has implemented airline direct connects that bypass the GDSs, and only with a limited number of major U.S.carriers. One big barrier to direct connect implementation is the technical challenges, especially in the corporate marketplace, where travel management companies (TMCs) have rigorous and complex requirements for fulfilment, exception handling and back-office integration. Capability to meet these requirements, which the GDSs have already invested in heavily to support add, to the cost and complexity of interfaces. Another big barrier is meeting the complex requirements set by airline alliances and airlines' interlining needs. GNE's technology is of course open source and flexible but it has not yet been developed to cover full functionality currently provided by the GDSs.

6.2 GDSs retaliated with updated technology and offering concessions

GDSs did not remain still to the GNEs' threat. All major GDS introduced to a larger or smaller extent important changes to their pricing models substituiting their originally "same price for all segments fees" with channel based pricing schemes distinguishing for example between direct and travel agency sales, domestic and international flights or

between leisure and corporate segments. This way they managed to offer concessions to airlines in the most price sensitive low cost segments whilst maintaining higher fees for the higher value tickets.

GDS also introduced efforts at the technology level. First as seen in section 4 they have all started migration programs to open architectures and second they are developing new products and functionality to adapt to the ever changing needs of the sector. For example they developed for smaller airlines and low cost carriers the ability to connect to a GDS network using XML Application Programming Interfaces (APIs) which allows airlines to connect to the GDS with a simpler protocol, and even opt for alternative arrangements where an airline prices the itinerary instead of relying on third party fare filing requirements and the GDS' pricing engine.

6.3 Missed the travel agency side of the equation

While the GNEs generated vast interest from airlines because of their proposition to reduce the cost of distribution, penetration into the agency side of the equation remained scarce. The GDSs offer suppliers worldwide distribution to thousands of travel agencies, both traditional and online. Without booking volume generated, lower distribution fees have no meaning to airlines.

One of the reasons why travel agencies did not buy into the GNEs model was that the level of content and functionality offered to them was inferior from the one supplied by GDSs. GDSs, have, over many decades and after serious investments, managed to develop an almost one-stop-shop content and sales platform for travel agencies. GDSs offer aggregated content (all major airlines, hotels car rental companies and many cruise lines and tour operators), global offering, proven, 99.9% reliable networks, interline capabilities, guaranteed airline pricing, established customer service support, ancillary vendors, highest security for personal data, innovative products to help agencies such as group capabilities and all kinds of front, -mid and back-office solutions for travel agencies to handle the full reservation process. GNEs came into the market with a far more limited product for the agencies.

Most importantly GDSs offer agency incentives for reaching goals. To cut down cost to the airline GNEs abolish the incentives paid to the travel agency and claim to replace it with better fares content from the airlines. But agencies and travel management companies are not encouraged if there are no attractive incentive schemes.

The GDSs accounted for 59% of all flights segments booked in 2006 (PhocusWright), and while this shares is declining gradually, it still represents a substantial portion of the total marketplace. Remove low-cost carriers such as Southwest, JetBlue and AirTran (all of which generate a far greater portion of their sales through their Web sites) from the segment share assessment, then the GDS segment share gets much closer to 70%. The top six U.S. network carriers remain dependent upon the GDSs for a substantial majority of their sales.

6.4 GDS lead to higher value customers

Not only do the GDSs give access to a wide travel agency network. Most importantly GDSs steer to "higher yield" customers. Indeed, JetBlue VP Revenue Management R. Zeni has said that tickets sold through GDSs have a $30 average fare premium over those sold via its own Web site JetBlue.com. This is so because a significant majority corporate travel is booked through travel agencies and the GDSs, including bookings generated from online corporate booking tools. Currently, nearly 81% of online corporate bookings and 75% of offline transactions go through intermediaries (traditional and Internet travel management companies) which use the GDSs for almost all transactions and which as seen above are reluctant to migrate to a GNE platform. Furthermore, many large corporations are using automated tools that sit on top of GDS technology to manage their employee travel needs which makes the switch to a GNE even more challenging.

Another important aspect for business travellers is the possibility to reserve complex itineraries on both national and international basis. Such itineraries are only possible when the reservation system allows "interlining" that is the ability to see (and reserve) in a single availability display which flights can be combined to reach a specific destination. GNEs still lack this capability.

Because of the higher margins it provides, the corporate travel segments not only attracts traditional carriers. Recently, more and more LCCs are making efforts to get business from this segment.

In order to make their product accessible to large corporations Low Cost Carriers (LCCs) need to have their offer fully integrated in the corporate travel tools, now only possible if they participate in the main GDSs. Full integration would allow for example corporate travellers to compare the LCC offer with traditional carriers on a single availability search (on the contrary, the lack of real-time comparison makes the travel purchase process more complex and cumbersome).

LCCs want to enter the higher-yield segment available via the GDSs without losing their customers to online agencies. A good example of how LCCs take advantage of the GDS model is JetBlue which negotiated to provide the full range of its discounted fares to traditional travel agencies but only through the designed corporate bookings tools. This gave JetBlue a way to win new business travellers without eroding bookings on its website.

7. Conclusion on the future for GNEs and GDSs

Despite the predictions that the GDS business would disappear, GDS still account for nearly 60% of all air segments booked in the US market today (source PhocusWright) and three out four major GDS continue to enjoy healthy growth and margins. The prospect of major carriers withdrawing from GDSs in the short term is becoming increasingly unlikely as GDSs cut off prices and shift to a more diversified range of airline technology solutions, embracing a role of integrated technology partners. The mid

and long term prospects for the airline-GDS relationship are nevertheless a question mark.

The shift of distribution power from travel agencies to airlines is now a fact with the airlines stepping forward as winners (they have managed to reduce distribution costs through reduced GDS fees in the lower value discount fares and through cutting off commissions and incentives to travel agencies). GDSs have also managed to maintain overall revenue and profit levels by hooking into airlines' web bookings with internet booking engine technology and maintaining their travel agency and airline clientele with strong content, advanced reservation technology and full-service integrating technology platforms.

GDSs are gradually losing distribution market share but the overall transaction volume they have been handling has been growing as air demand and in particular corporate international bookings (the segment where GDSs are stronger) are in the last years in an upturn. With airlines and GDSs on the winner side it results that travel agencies have been the participants of the distribution triangle (airlines-GDS-travel agencies) suffering the most. The largest losses have been experienced by smaller, leisure travel focused travel agencies which, as expected, are facing serious consolidation. This is particularly true in the US where the shift in distribution power was more prominent (currently 1% of travel management companies account for more than 60% of the TMC market) due to the earlier introduction in this market of the elements that have brought to this shift (Internet penetration, direct airline sales, low cost carriers' growth, and deregulation of GDSs).

The distribution power game has still not finished as the market conditions are still very dynamic. First, GDS deregulation has still not shown its full impact; deregulation is still not the case in Europe and the rapidly growing Asian markets, and airlines still make their content available to all GDSs and travel agencies. But this could change and in the future airlines might not commit themselves to providing all of their content to the GDSs. This would put additional downward pressure on GDS fees and GDS would need to find alternative sources of value to their service to justify their prices. Second, airlines remain focused on driving business through their own Web sites taking an increasingly higher number of booking transactions away from online travel agencies and from the GDSs. It is still unknown what the final share of direct versus indirect sales will be but airlines and travel management companies will fight fiercely to channel leisure and corporate travellers to their Web sites.

In this atmosphere GNEs may have fallen short of the high expectations they initially raised, but they show a true potential as future distribution players. Should the GNEs lock in contracts with key travel management companies that drive substantial volume, this could put in jeopardy a large share of corporate travel transactions that today comprise the GDSs´ main business and shift even more power away from GDSs toward airline. As it is the travel management companies that are delivering the vastly higher ticket prices, not the GDSs (as their customer would purchase higher ticket value travel regardless of the technology they use), GNEs could gradually fill in the gap with GDS on the travel agency network side. Central to the GNE distribution strategy has to be fitting into the

complex and chaotic world of agency systems, especially for fulfilment, reporting and other back-office functions in the corporate arena. If GNEs manage to fill the functionality gap in these areas, their chances to evolve into a considerable distribution channel will increase.

GNEs have already made some important steps in the direction of extending their TMC base. G2 Switchworks has signed deals with Carlson Wagonlit Travel, Priceline and Trisept Solutions for the deployment of the G2 Agent tool with the VAX leisure booking systems for travel agents. Farelogix too has achieved a footing on the airline and travel agency sides, and ITA Software, whose immediate strategic emphasis has shifted to airlines reservations hosting with its launch customer Air Canada, has made it clear it is fully committed to its distribution product. Certainly more volume would be necessary for GNEs to establish themselves as serious players in airline distribution.

Although GNE market penetration has yet to be proven GNEs as they continue to build their capabilities and gain acceptance in the agency community augur a gradual shift in market share in the years to come. Potential growth by the GNEs would increase the pressure for GDSs to reduce booking fees but it is also possible that the contrary happens with GNEs increasing their bookings fees to allow them to pay incentives and thus gain a footing in the TMC community.

GDSs still represent critical access to the premium (airlines´ favourite) corporate segment but they will have to give more ground on lower fares and deliver on improved merchandising and other functionality. While more downward pressure on segment fees for low fare travel is expected, airlines will accept higher fees for access to the premium corporate segment and for support of the more complex functionality required by TMCs.

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